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An Investigation of Rural Teachers’ Perspectives of an Online Professional Development Program in China

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**Abstract**

This paper presents results of a study conducted with teachers of rural schools in the south of Ningxia in Northwestern China, one of the less developed areas of the country. A snowball sampling method was employed to invite schoolteachers who had recently attended an online training program on how to use information technology in the classroom to voluntarily participate in the study. A survey questionnaire was used for collection of research data regarding participants’ demographic information, their willingness to attend the program, and their perceived learning from the program, with the purpose to understand research participants’ learning experience in the program. The findings indicate that there were certain benefits from the online professional development program, but improvements in a number of aspects are necessary so as to yield better results in the future. It is the authors’ hope that what is reported in the paper will not only benefit designers of online teacher professional development programs, but also educational administrators, who can take a holistic approach to get all available resources evolved for a best possible teacher professional development program.

**Keywords:** Rural schools, Teachers, Online, Professional development, China, survey, Snowball sampling, Learning experience, Program design, ResourcesBackground

In recent years, in order to strengthen the education in rural areas and address education equity, the Chinese Education Administration has been paying significant attention to the education development in rural areas in the country, including education of pre-service teachers and the professional development of in-service teachers. The “National Training Plan for Schoolteachers” (NTPS), which is co-sponsored by China Ministry of Education and Ministry of Finance, is an important initiative for the professional development of schoolteachers across the nation. Since 2010, a significant amount of funds has been allocated to the NTPS. One component of the plan is “Training Project for Master Teachers of Rural Areas in Central and Western Regions”, which includes selecting teachers from rural schools to have advanced study at university, providing training sessions for teachers from such schools, and organizing online training for those from remote areas. The training program not only helped with the professional development of the abovementioned teachers, but also to a certain extent, addressed the equity issues such as limited access to various kinds of resources and imbalanced teaching loads.

With the increasing availability and accessibility of computers and Internet in rural schools, online professional development has been employed as one of the useful measures to deal with challenges faced by teachers in rural areas in terms of their professional development because of their remote location, lack of resources, and teaching load. With its advantages over face-to-face teacher professional development that can only benefit a limited number of participants in the training programs, the online professional development is drawing increasing attention. However, as this mode of training is comparatively new to participants, research is needed to examine the perspectives of teachers who participated in the program, expectations they had of the program, and challenges they experienced, so as to provide recommendations to help improve the design and delivery of the training programs in the future. This paper reports a study conducted with participants who had recently attended an online teacher professional development program offered by NTPS.

# Literature review

## Difference models of teacher professional development

In an era of school reform, many consider the education and professional development of teachers as the keystone to educational improvement (Hawley & Valli, 1999). This description applies to the situation in China, because with the education reform and the dynamics of teaching and learning, increasing attention has been paid to teacher professional development in China in recently years.

Teacher professional development is a process for teachers as professionals to have a continuous development in their pedagogy, their content knowledge, and their teaching skills, a process for them to start as novice teachers and eventually become expert teachers (Yu & Lian, 2007). Hargreaves (1995) argues that teacher professional development does not only involve a technical dimension regarding knowledge and skills, but also a dimension of value and moral sensibility. With an attempt to summarize viewpoints of various scholars, Day (1999) asserts that teacher professional development can mean any learning activities, self-motivated or organized, which lead directly or indirectly to the benefits of individual, team or school that improve the learning outcomes of classroom teaching. Schlager and Fusco (2003) assert that “teacher professional development is more than a series of training workshops, institutes, meetings, and in-service days. It is a process of learning how to put knowledge into practice through engagement inpractice within a community of practitioners” (p. 207).

In the past few years, studies have been conducted to find out learning outcomes of face-to-face and online professional development programs. For instance, with the attempt to explore the question of whether virtual and in-person workshops would vary in their effect on teacher learning and teachers’ use of their learning from a professional development intervention, Fisher, Schumaker, Culbertson and Deshler (2010) randomly assigned teachers enrolled in a special education course to either the online or in-person setting, and in each setting, teachers were provided with the same content materials that were focused on student learning. Their study indicates that although teachers assigned to the in-person setting reported higher satisfaction levels, no significant differences were found in teacher learning results between the two groups. Fishman et al. (2013) also examined whether in-person and online professional development resulted in different teaching and learning outcomes, and their findings indicate that in both conditions, teachers increased their confidence to use the new curriculum materials and used the materials in ways intended by the designers, and drew the conclusion that there were no appreciable differences in student learning between the two treatments.

Teacher professional development programs that can foster more effective, scalable, and sustainable professional development in education systems are highly demanded, as many studies (e.g., Garet, Porter, Desimone, Birman & Yoon, 2001; McLaughlin & Mitra, 2001; Smylie et al, 2001) have consistently found that professional development programs are not properly connected to practice, unsystematic, and many of them lack key pedagogical, content, and structural characteristics, or without the capacity to provide support on an ongoing basis.

To make professional development programs effective, designers and facilitators need to know the attitudes and expectations of the participants. Jaffe, Moir, Swanson and Wheeler’s (2006) study suggests that the teacher participants in professional development programs are interested in getting resources and ideas for their teaching, but deepening their pedagogical content knowledge is not as important to them as anticipated. It is not surprising that teachers as practitioners are more interested in “practical stuff” that can directly benefit their teaching, but at the same time we should realize that designers of professional development programs have the responsibility to integrate a component that can help deepen trainees’ pedagogical content knowledge, which is a challenging and demanding task.

## oTPD

The online teacher professional development (oTPD) usually means the professional development experience that takes place in an online and interactive environment (National Research Council, 2007). An efficient and effective professional development program is expected to fit with teachers’ busy schedules and provide powerful resources that are often not available locally. One of the advantages of oTPD is that it can “create an evolutionary path toward providing real-time, ongoing, work-embedded support. … Furthermore, online professional development programs also are potentially more scalable than those that depend purely on local resources and face-to-face interactions” (Dede, Ketelhut, Whitehouse, Breit, & McCloskey, 2009, p. 9).

Poorly designed programs may contribute to disappointing results, so it is important to make sure that the programs are well designed, and to achieve this goal, efforts should be made on “exploring which design features lead to promising professional development outcomes” (Hill, Beisiegel & Jacob, 2013, p. 478). Hill, Beisiegel and Jacob (2013) suggest that professional development should be limited to one school year or less as “working with teachers for shorter amounts of time is more reflective of both model professional development delivery” (p. 483). Powell and Diamond (2011) suggest that more research is necessary to have a better understanding of “consistent effects” of delivery mode on student learning outcomes.

Current oTPD programs and research initiatives center on program design and effectiveness, largely within a community-of-practice theoretical framework that promotes collaboration and reflection (Dede, Ketelhut, Whitehouse, Breit, & McCloskey, 2009). In a community of practice, which can be formed when individuals are engaged in a common enterprise working toward shared outcomes (Wenger, 1998), participants with the same goal talk together about what they are doing and why they do it that way, and learn new practices from observing others and begin to participate in the practices themselves (Wenger, 1998). In an online learning environment, participants can work with web-partners so they can exchange their thoughts and ideas (Bonk & Reynolds, 1997).

The use of oTPD programs are on the rise because of their various advantages, but research needs to be conducted to learn more about best practices for the design and implementation of these models, because “Evidence of effectiveness is often lacking, anecdotal, or based on participant surveys completed immediately after the professional development experience rather than later, when a better sense of long-range impact is attainable” (Dede, Ketelhut, Whitehouse, Breit, & McCloskey, 2009, p. 9).

Dede, Ketelhut, Whitehouse, Breit and McCloskey (2009) suggest that research on oTPD should ask two types of questions, ones that are designed to understand some aspects of the program and those for program evaluation. Following this advice, our study tried to address both research questions and evaluation questions.

*Teacher Professional Development in China*

With the reform in education and the dynamics of teacher professional development, increasing attention has been paid to teacher professional development in China in recent years. The reform calls teachers upon to “transform the classroom experience by putting students at the center of learning, using praise and encouragement to motivate students, and experimenting with new approaches to teaching” (Yiu & Adams, 2013, p. 996). In the *Outline of the national plan for medium and long-term education reform and development (2010-2020)* (Ministry of Education, 2010), teacher professional development is mentioned as one of the core tasks, which emphasized the importance of lifelong learning of teachers to meet the needs of the development in education in the country. A variety of measures, including NTPS, have been taken to promote and carry out professional development of teachers. There has been an increasing number of research projects investigating teacher professional development programs supported by new technologies, and as a new model that transforms traditional programs, online teacher professional development has drawn attention of researchers in this field (Wang, 2008).

Research on oTPD has been around in China for about a decade. Our review of relevant literature reveals that the term “online professional development” was first mentioned in 2006. Gu (2006) introduces the design of platform that supports action learning, and Yin and He (2006) discuss the definition of online teacher professional development,its functions and primary elements. More and more scholars in China started conducting research on the online teacher professional development since 2006. In her article *Online teacher professional development (oTPD): Background, research, advantages and challenges*, Wang (2008) offers some background knowledge about online teacher professional development, provides an introduction to research on the topic, surveys potential advantages of the mode, cautions challenges that can be faced by this professional development model, and argues that online teacher professional development is a way that transfers the traditional teacher professional development model to a new model. Fu (2009) advocates oTPD by introducing its values and implementation strategies. Besides research on professional development of schoolteachers, there has been research on online professional development for college teachers as well (e.g., Pan, 2011). Presumably, oTPD should be utilized more widely for schools in remote areas of the country, as the availability and accessibility of Internet connected computers from these areas have significantly increased in recent years, which can help to overcome difficulties caused by geographic barriers. However, more research has to be conducted on the online teacher professional development for teachers in rural school, especially those in remote and less developed areas.

## Education in rural and remote areas in China

When talking about education in rural and remote regions in Australia, Green and Reid (2004) argue that “the children of Indigenous Australian families and children who receive their schooling in rural and remote areas, do not do as well, or even stay at school as long as those in the cities” (p. 259). This phenomenon is probably universal, or at least true in China. China has seen rapid economic development in the past few decades, but the growing social inequality and gap between urban and rural schools remain some of the issues to be urgently dealt with. Since 2007, the state has pursued an aggressive strategy to ensure access to compulsory education in rural areas (Adams & Hannum, 2005), and carried out a number of initiatives, such as offering tuition waiver, and free textbook and lodging to rural students, which “reflect a vigorous government agenda to address growing social inequality by narrowing the gap between urban and rural education” (Yiu & Adams, 2013, p. 994).

Besides different types of support in financial aspect, efforts have also been made on curriculum reform that includes a rewritten of all curricular materials, a revision of textbooks, and investment in in-service teacher professional development to promote new classroom practices (Adams & Sargent, 2009). In their literature review regarding education in rural and remote areas, Yarrow, Ballantyne, Hansford, Herschell and Millwater (1999) suggest that in order to best prepare and support teachers who teach in rural and remote areas, it is important to have “more effective partnerships between universities, departments of education and community members and organizations” (p. 11). However, in our review of literature, we did not find much research that emphasizes such partnerships.

# Research method

## Research questions

The purpose of this study was to examine how research participants perceived the online teacher professional development program, what had been their expectations of this program, what challenges they experienced during the program, and what suggestions they had for the improvement of such programs. The following research questions were used to guide this study:

* How do participants perceive the online professional development program?
* How could the program be improved for better results?

## Research context

The online teacher education program is a part of NTPS and is hosted by the National Continuous Education for Schoolteachers Network (<http://www.teacher.com.cn/>), a portal for a variety of online training program. Figure 1 is a screenshot of the portal.



Figure 1 Screenshot of the National Continuous Education for Schoolteachers Network portal

From the portal, teachers from different parts of the country can log into their accounts to access the space that is allocated to their province or district. Figure 2 is a screenshot of the homepage, where participants of this study used to log into their learning space.



Figure 2 Login page for research participants

Research data for this study were collected from primary and secondary schoolteachers in southern Ningxia, a region that is in north-western China “with relatively high levels of illiteracy, widespread poverty and low rates of economic growth” (Yiu & Adams, 2013, p. 999). The online training program they attended was on how to use information technology (educational technology) in the classroom, and teachers who attended and completed the program could use the certificate as a partial fulfillment for their annual continuous education requirement. Video clips of experts’ lectures are available for the trainees to watch at their own preferred time and location, and learning spaces were set up for teachers from adjacent counties to work together as a group. Trainees were required to watch the video clips, post reflections on the learning materials, respond to discussion questions, and submit their completed assignments to their tutor, who was responsible to assess their assignments. The program ran from mid-October to the end of 2014.

## Research participants

A snowball sampling method was employed for data collection. A request was posted in an online group (QQ group) with the link to an online survey questionnaire, asking members of the group to forward the request and link to their friends from southern Ningxia who had participated in the online training program. Eighty (n=80) completed questionnaires were returned. The total population size is unknown. However, since the intention of this study is exploratory, we consider the data set valuable for the scope of this paper.

# Findings

## Demographic information of research participants

Response to questions about the demographic information of the participants indicates that the participants belonged to various age ranges with different teaching experiences. About 70% of the participants were in the age range of 21 to 30, and 25% were between 31 to 40 years old. About 75% had teaching experience of 5 years or less, and about 12% had teaching experience of 6-10 years. This data should be analyzed with caution, because this phenomenon could be interpreted as only trainees of this age group participated in the study, or schools in this area faces challenge of teacher retention. In terms of their educational background, twelve (15%) had a college diploma, sixty-six (83%) had a bachelor’s degree, and one had a Master’s degree. This means that the majority of teachers have a bachelor’s degree, but there is still a certain percentage that has only received an education that is lower than a bachelor’s degree. This can be interpreted that in-service professional development is needed for teachers of these schools, and at the same time, some teachers are expected to upgrade their education level through full-time or part-time programs. Among these participants, approximately 70% were female, which correlates with the percentage of participants who were teaching in elementary schools.

## Willingness for attending the program

Participating in the online professional development program was not required of all the teachers, but as an alternative to fulfill their annual professional development requirement, and this choice was comparatively more convenient than travelling to the education bureau in the city to take an examination. One of the survey questions was designed to find out the participants’ willingness for attending the program by making an indication on a scale, which showed their level of willingness before joining the program. As demonstrated in Table 1, more than half reported they were either “very much willing” or “willing”, while about 20% reported they were “a little unwilling” or “very much unwilling”. The rest of the participants indicated they were a little reluctant but participated without strong objections. The unwillingness could be because the participants were not interested for their professional advancement (especially those who were close to their retirement age), or they were not confident that the program could provide what they really needed for improving their classroom teaching. It could also be possible that, based on their previous negative experiences of other professional development programs, they were not motivated to spend time and efforts on such programs.

Table 1 Willingness to participate in the online professional development program

|  |  |  |  |
| --- | --- | --- | --- |
| Level of willingness | Number of responses | | Percentage |
| Very much willing | | 28 | 35% |
| Willing | | 16 | 20% |
| Neither willing nor unwilling | | 21 | 26.3% |
| A little unwilling | | 13 | 16.3% |
| Very much unwilling | | 2 | 2.5% |
| Total | | 80 | 100% |

## Perceived learning

In response to the question about what they felt they learned from this online professional development program, about 32% participants indicated they were very satisfied as they felt they learned a lot, about 36% felt what they learned barely met their expectation, about 20% of them reported that overall they did not think they learned much useful stuff, and 10% of the participants indicated that they were disappointed because they did not think the program was worthwhile to attend, as they believed that what they learned was far less than what they had expected to learn in this program.

Table 2 Learning

|  |  |  |
| --- | --- | --- |
| Perceived learning | Number | Percentage |
| Learned a lot | 26 | 32.5% |
| Not as much as expected | 29 | 36.25% |
| Learned something | 17 | 21.25% |
| Learned little | 8 | 10% |
| Total | 80 | 100% |

In regards of what they perceived they learned, as demonstrated in Table 3, more than 40% felt they learned some new pedagogical theories, or familiarized themselves with online learning tools and methods, and about 30% felt they learned new teaching methods that could help them improve their teaching. Some participants mentioned that besides obtaining relevant content knowledge and exposure to the new educational theories, the learning experience got them familiarized with the online learning tools and methods, which they could use in their own teaching.

Table 3 Content of perceived learning

|  |  |  |
| --- | --- | --- |
| Content of perceived learning | Number | Percentage |
| Relevant knowledge | 33 | 41.25% |
| New pedagogical theories | 44 | 55% |
| Familiarization with online learning methods and tools | 46 | 57.% |
| New teaching methods | 34 | 42.5% |

## Learning experience

In their comments on the learning experience in the online learning environment, many research participants compared the online professional development program with those that delivered face-to-face, and mentioned advantages such as saving time and effort, freedom to choose their content they wanted. Furthermore, the learning process can be controlled freely by the trainees themselves, which creates more freedom in the communication among group members. Participants also identified disadvantages of the online model, such as the lack of authenticity in the communication between experts and trainees, technical difficulties (including hardware, software and network connection) they experienced, and frustrations they had at the beginning of the program due to their limited knowledge of this specific learning environment, and lack of tech support when problems occurred. Specific themes identified include: **"**Interaction with experts not authentic", **"**Network speed was too slow", "Lack of organization", and "Operation was too complicated; Don’t know how to use".

# Discussion

Through the online professional development program, rural teachers get familiar with tools and methods in the online learning environment. Moreover, it raises the rural teachers' awareness of available resources, and how to locate such resources on the Internet. By attending the oTPD program, teachers of rural schools got an opportunity to gain knowledge and skills of software and hardware that could enhance their teaching. However, the infrastructure such as network speed needs to be improved for a better online learning experience. Particularly, the requirements of online learning platforms for hardware and network environment were incompatible with each other, and the resources were not designed for teachers in rural schools. To optimize the professional development, improvements on organization should be made to have a platform that hosts integrated resources specifically useful for rural teachers, and offers a user-friendly environment in which multidimensional interactions can take place between facilitator and learners, and among learners themselves. Considering that nowadays many teachers have access to smartphones, programs can be developed for these teachers to enhance their professional development so they can take advantage of mobile learning.

It should be kept in mind that oTPD cannot be achieved only through short-term training, but has to be sustainable and implemented as a long-term support for teacher professional development. Teachers who have encountered problems at any time can enter the training platform to get help, which transfers the short-term online professional development into long-term learning. Instead of offering the training sessions during the semesters, when teachers are already kept busy by their heavy teaching load, they could be offered during winter and summer breaks.

A community of learning is a valuable venue for teachers’ professional development, but they need to be effectively moderated so that all the participants in the learning environment feel welcome and engaged. In the online system studied, there were different spaces set up for facilitators and trainees to communicate, but there was not really any sense of community of learning created among trainees, because there were no local moderators/tutors assigned to facilitate learning in the environment except for the assessment of assignments. Local education institutions should be invited and encouraged to take part in the teachers’ professional development, and as an enhancement, face-to-face or online programs should be organized in which teachers can have dialogues with experts, and their peers topics including the subject content, teaching activities, teaching experiences exchange, etc. Also, one-to-one guidance for teachers should be made available in addition to group interaction. It is believed that multidimensional interactions are appreciated, and active participation with all the parties involved can help to guarantee the all-round development of teachers' professional knowledge and skills.

# Conclusion

Professional development is one of the effective ways to update and upgrade teachers’ knowledge and skills, and with the availability of networked computers and other devices, oTPD can be employed to serve the purpose for the professional advancement of teachers, particularly teachers in rural and remote schools, where resource is limited and opportunities for professional development is more scarce due to geographic distance and teachers’ teaching load. However, specific considerations are needed when oTPD is offered to rural teachers so as to make sure that a quality learning experience is provided because these trainees may require assistance due to their less satisfactory infrastructure, and problems they have in their teaching practice. It cannot be assumed that a community of learning is created within an online learning environment only by setting up communication spaces, so experienced moderators and/or facilitators should be assigned for the online learning program, and local educational institutions should get involved so as to yield best possible results.

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